



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,494	11/08/2001	Ian Dawes	2545-000011	3319
27572	7590	06/02/2006		
HARNESSE, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			EXAMINER SINGH, DALZID E	
			ART UNIT 2613	PAPER NUMBER

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/035,494

Applicant(s)

DAWES ET AL.

Examiner

Dalzd Singh

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-12,14-16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,8-12,14-16 and 18 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the appeal brief filed on 09 March 2006, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

Claim Objections

2. Claims 1, 9 and 14 are objected to because of the following informalities: the claims recite structural element "operable" to perform certain function. For the purpose of examination, limitation following "operable" will not be given much weight. For example, a prior art will be able to perform such function if the prior art comprises the same structural element.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 8-11, 13 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin et al (US Pub. No. 2002/0012144).

Regarding claim 1, Lin et al disclose optical transmission system, as shown in Fig. 7, comprising:

an optical transport line (1) terminating at the network element (350), the optical transport line operable to carry an optical system signal therein;

a demultiplexing component (310) connected to the optical transport line, the demultiplexing component operable to receive the optical system signal and separate the optical system signal into a plurality of intermediate optical signals ($\lambda_1, \lambda_1 \pm \text{FSR}$, $\lambda_1 \pm 2\text{FSR}, \dots$; $\lambda_2, \lambda_2 \pm \text{FSR}, \lambda_2 \pm 2\text{FSR}, \dots$; and $\lambda_n, \lambda_n \pm \text{FSR}, \lambda_n \pm 2\text{FSR}, \dots$); and

a plurality of optical fibers connected to the demultiplexing component (Fig. 7 shows plurality of optical fiber connected to the demultiplexing component (310) to carry the plurality of the optical signal), each of the optical fibers operable to carry an optical management signal and one of the plurality of intermediate optical signals therein, the optical management signal being transmitted at a wavelength different than the

wavelength range used to transmit the intermediate optical signal (on paragraph [0038], Lin et al disclose supervisory signal supplied to respective demultiplexer; the supervisory signal is considered as management signal; therefore each optical fiber coupled to the demultiplexer is operable to carry the supervisory or management signal) the optical management signal being transmitted at a wavelength different than the wavelength range used to transmit the intermediate optical signal (Fig. 8 shows plurality of multiplexed optical signal comprising of multiple wavelengths; the supervisory signal is around 1510nm; see paragraph [0038]).

Regarding claims 2 and 10, on paragraph [0038] Lin et al suggest that the optical (supervisory signal) management signal is transmitted at a wavelength that is spectrally separated from the transmission wavelength range for the plurality of intermediate optical signals (see Fig. 8).

Regarding claim 8, as shown in Fig. 7, Lin et al show that the post-filter (F) receive and separate the optical management signal (supervisory signal) and the intermediate optical signal from the demultiplexer (see also paragraph [0038]).

Regarding claim 9, Lin et al disclose optical transmission system, as shown in Fig. 7, comprising:

terminating an optical transport line (1) at a network element (350) residing in the optical transport network, the optical transport line operable to carry optical management signal (supervisory signal) and the optical system signal having a plurality of optical data signals ($\lambda_1, \lambda_{n-1}, \lambda_n \dots$ and $\lambda_1', \lambda_{n-1}', \lambda_n' \dots$) (see paragraph [0038]) embodied therein;

routing the plurality of optical signals amongst a plurality of optical fibers associated with the network element (Fig. 8, shows plurality of optical fiber connected to the demultiplexing component (310) to carry the plurality of the optical signal); and

defining an optical management channel for each of the plurality of optical fibers (on paragraph [0038], Lin et al disclose supervisory signal supplied to respective demultiplexer; the supervisory signal is considered as management signal; therefore each optical fiber coupled to the demultiplexer is operable to carry the supervisory or management signal).

Regarding claims 11 and 15, as discussed above, Lin et al disclose the supervisory channel (management signal) is in the 1510nm (it is inherent that the management signal is selected to be spectrally separated from the wavelength range used to transmit the optical data signal in order reduce interference or crosstalk).

Regarding claim 14, Lin et al disclose optical transmission system, as shown in Fig. 7, comprising:

a plurality of network elements residing in the optical transport network (350 and 351);

a plurality of optical transport lines (1, 2, ... M) interconnecting the plurality of network elements (350 and 351), each optical transport line operable to carry an optical system signal and the optical system signal having a plurality of optical data signals embodied therein (see paragraph [0038]); and

a plurality of optical fibers (Fig. 7 shows plurality of optical fiber connected to the demultiplexing component (310) to carry the plurality of the optical signal) associated

with each network element, each of the optical fibers operable to carry one or more optical data signals ($\lambda_1, \lambda_1 \pm \text{FSR}, \lambda_1 \pm 2\text{FSR}, \dots; \lambda_2, \lambda_2 \pm \text{FSR}, \lambda_2 \pm 2\text{FSR}, \dots; \text{ and } \lambda_n, \lambda_n \pm \text{FSR}, \lambda_n \pm 2\text{FSR}, \dots$) and an optical management signal (supervisory channel) (see paragraph [0038]) therein (on paragraph [0038], Lin et al disclose supervisory signal supplied to respective demultiplexer; the supervisory signal is considered as management signal; therefore each optical fiber coupled to the demultiplexer is operable to carry the supervisory or management signal), the optical management signal being transmitted at a wavelength different than the wavelength range used to transmit the optical data signals through the corresponding optical fiber (Fig. 8 shows plurality of multiplexed optical signal comprising of multiple wavelengths; the supervisory signal is around 1510nm; see paragraph [0038]).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 5, 12, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al (US Pub No. 2002/0012144) in view of Barry et al (US Patent No. 6,433,903).

Regarding claims 3, 12 and 16 as discussed above, Lin et al suggest that the intermediate optical signal and management signal (supervisory signal) have different

wavelengths (shown in Fig. 8) and differ from the claimed invention in that Lin et al do not specifically disclose that the plurality of intermediate optical signals are transmitted at a wavelength in the range of 1520 nm to 1610 nm and each of the optical management signals are transmitted at substantially 1310 nm. However, it is well known to transmit optical signal and management signal (supervisory signal) at various wavelength ranges. Barry et al is cited to show such well known concept. In col. 4, lines 60-63, Barry et al disclose the use of supervisory channel in such wavelength range. Therefore, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to provide the optical signal and management signal (supervisory signal) with such wavelength range. One of ordinary skill in the art would have been motivated to do such in order to reduce crosstalk or interference between management signal and data signal.

Regarding claims 5 and 18, as discussed above, Lin et al disclose that the optical signal which comprised of intermediate optical signal and management signal (supervisory signal) are transmitted in a multiplexed fashion and are independent of the other, therefore, it would have been obvious to an artisan of ordinary skill in the art to transmit the optical management signal in the absence of the intermediate optical signal. Since the optical management signal contains status and condition of nodes or transmission lines, therefore one of ordinary skill in the art would have been motivated to transmit optical management signal in the absence of the other optical signal in order to detect condition of fiber links.

Allowable Subject Matter

7. Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DS
May 24, 2006


JASON CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600